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Ex-Post Evaluation on Program Performance in Management Science Department of NSF of China

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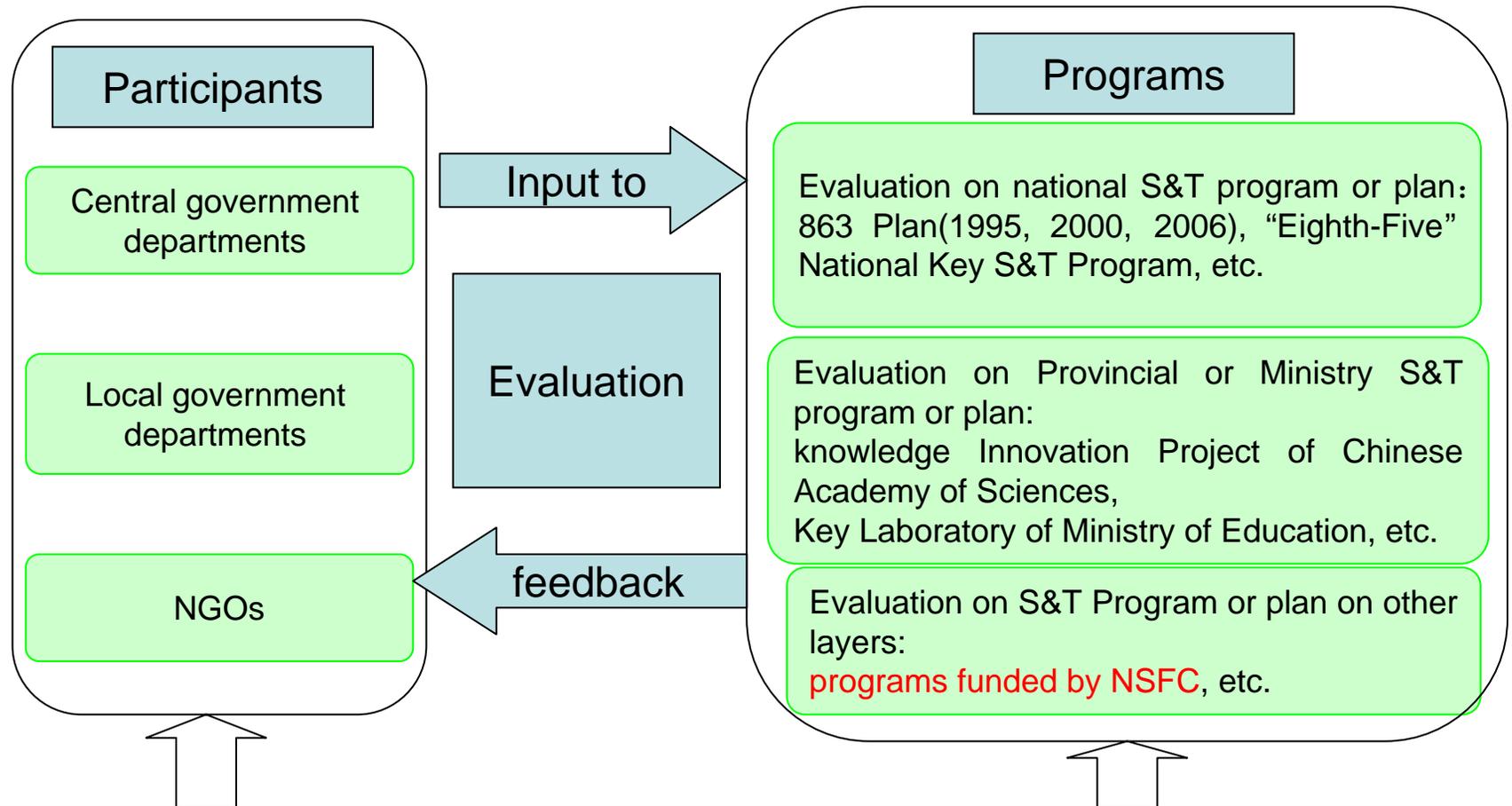
Outline

- **Introduction**
- The approach to implement Evaluation
- Data acquisition in evaluation
- Future development

Introduction

- Since ‘reform and opening up’ in 1978, rapid progress has been witnessed in terms of
 - institutional innovation and comprehensive changes
- Accountability has been intensified and Interests of public and society are enhanced
 - Top Down: Quasi MBO system;
 - Bottom Up: Citizen Participation Performance Evaluation
- Institutions about performance evaluation of Public Spending have been established by **Ministry of Finance**
 - *The Rule of Budget Expenditure Performance Evaluation Management on Central Government Department (Test)* (No. [2005]86)
 - *The Temporary Rule of Central Level Civilian Science and Technology Plan (Fund) performance Evaluation Management* (No. [2007]145)

Most Evaluations in Science and Technology Sectors: Missing 'Performance' before 2003



Institutions:

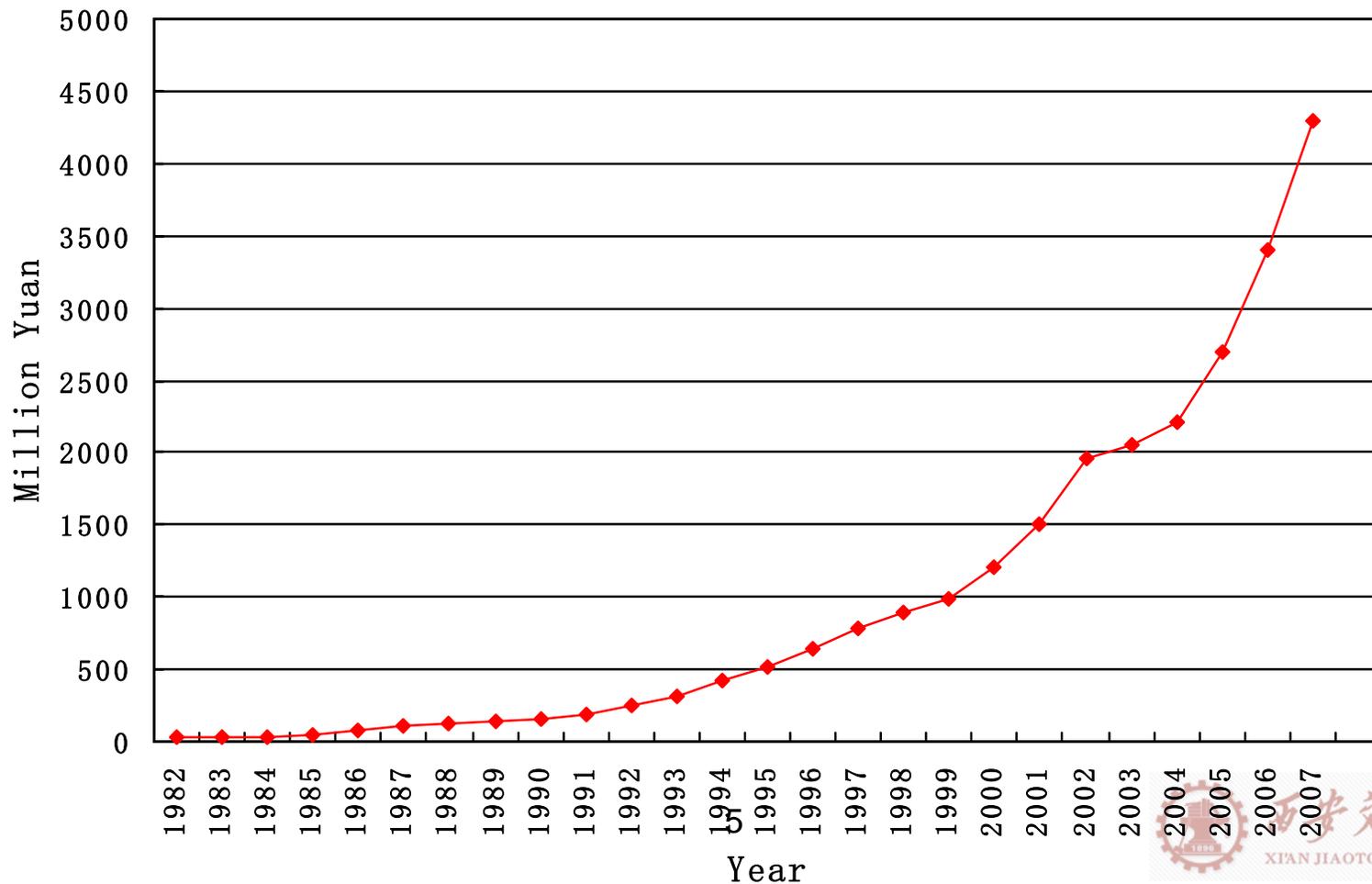
The Temporary Rule of S&T Evaluation Management, (2000, MOST)

The decision on Improving S&T Evaluation, (MOST, MOE, Chinese Academy of Sciences, Chinese Academy of Engineering, NSFC, 2003)

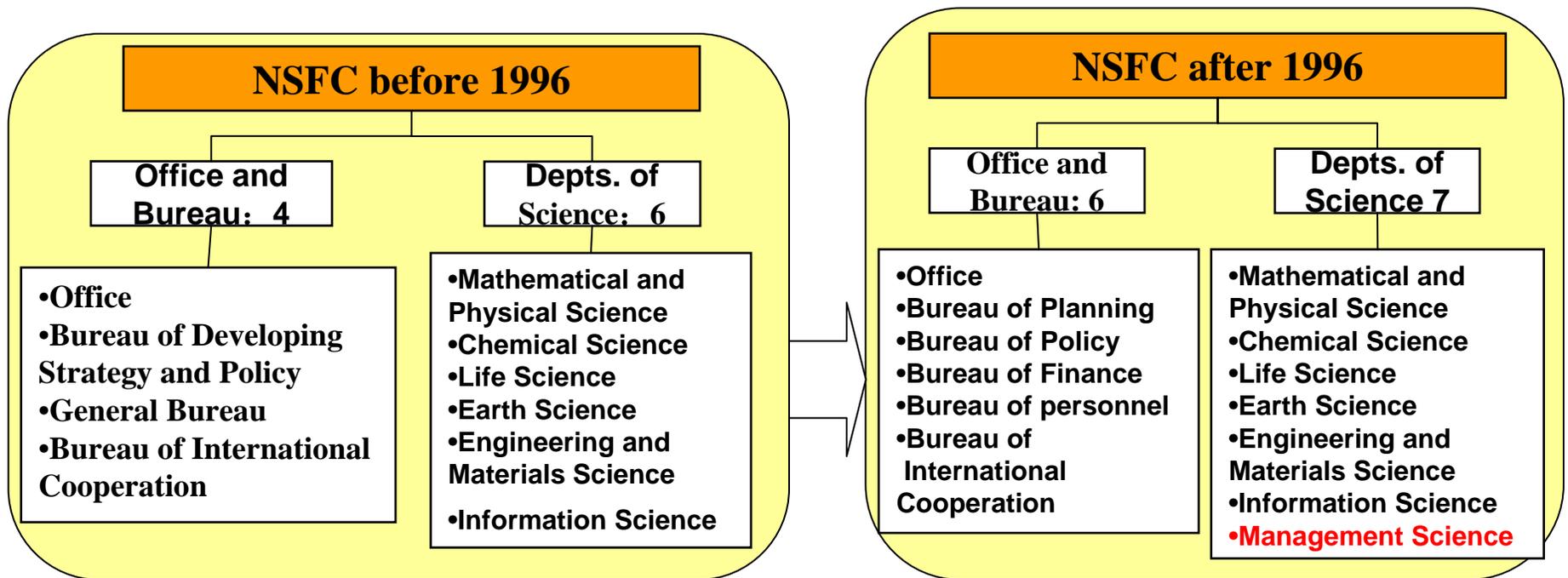
The Rule of S&T Evaluation (Test), (MOST, 2003)

The Evolution of NSFC: Financial Funds

- Over 30 million Yuan in 1982; over 80 million Yuan in 1986, over 1.5 billion Yuan in 2001, 4.298 billion Yuan in 2007;
- 1982-2007, increasing 170 times, 20% growth annually.



The Evolution of NSFC: Organization Development



- **A Clear Statement of NSFC function (2007)**
 - Supporting basic research
 - insisting on the strategy of free exploration
 - exerting leading functions
 - discovering and cultivating S&T talents
 - promoting S&T advancement, harmonious development of economy and society

NSFC's Exploration on Performance Evaluation: from Bureaus to Departments

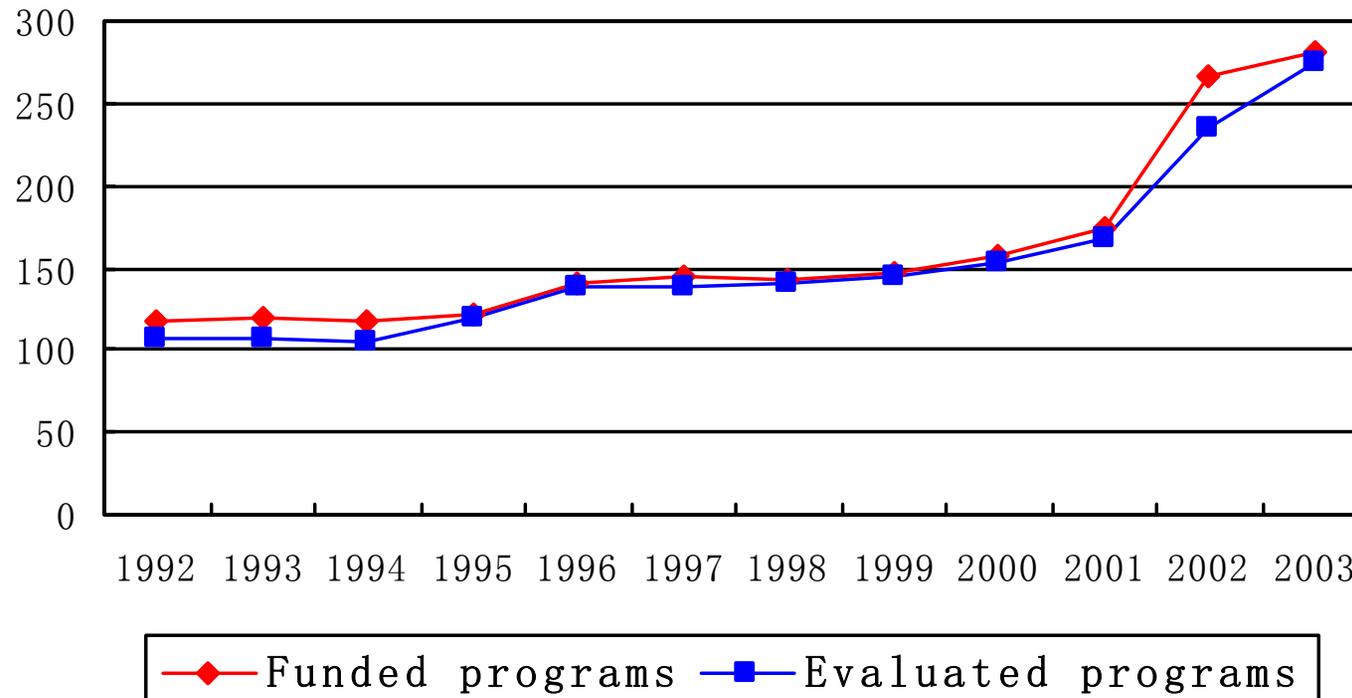
- **Research**

- Planning Bureau and Policy Bureau
 - U.S. federal evaluation on performance and results of public-funded basic research; Thoughts on performance evaluation on National Science Foundation of China (Gong et al 2003, 2004; Wang et al, 2007)
 - NSF's Performance Evaluation (Zheng, 2008)
- Department of Management Science (DMS)
 - Study on performance of foundation proposals (Yang,2001)
 - Ex post Evaluation-an Effective Way of Strengthening the Management of Supported Projects by NSFC (Chen, et al,2004)
 - Analysis and Assessment on the Projects Funded by the Department of management Sciences of NSFC (Li,2007)

- **Practice**

- Planning Bureau and Policy Bureau
 - Shuangqing Forum on Funding and Management Performance, October 15& 16, 2006,Beijing
- Depts. of Management Science (DMS) and so on

Performance Evaluation in DMS of NSFC



- Since 1998, successive performance evaluation has been implemented on finished programs during the period lasting 12 years against
 - **General Program (Free application)**
 - **Young Scientists Program, and**
 - **Less Developed Regions Program**

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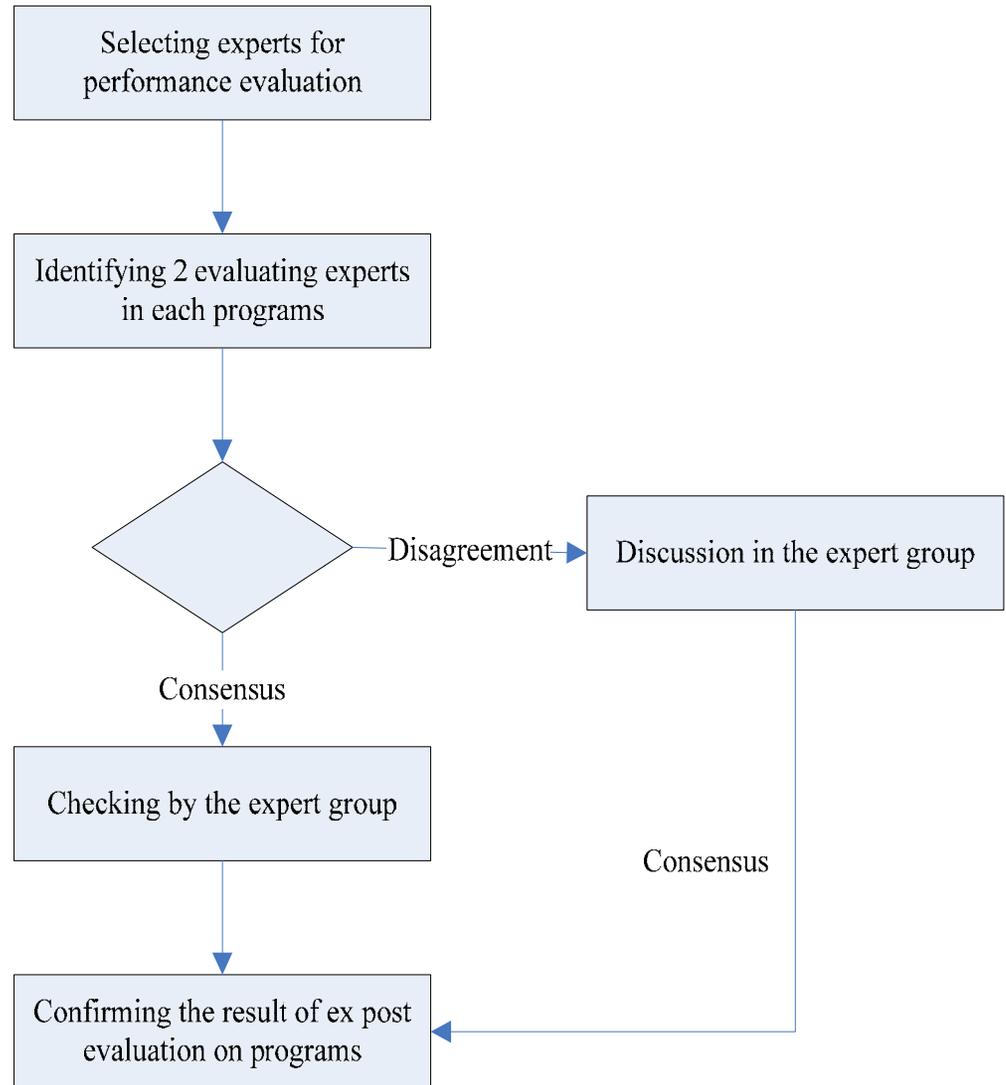
Purposes of Ex Post Program Evaluation in DMS

- To show the funding performance (celebrate?)
 - To demonstrate that the usage of funds is scientific
 - To promote the tenet of NSFC: science development and talent development
- To improve management
 - To actualize the supervision and evaluation functions
 - To search for integration of performance evaluation into routine work
 - To support the funding Policies and resource allocation: what kind of persons should be funded?

Ex Post Evaluation Approach

- The Evaluation Procedure

- In May and June of the year, an expert meeting is organized
- Before 2000, devising two groups with 20-25 experts in each conference to evaluate the programs
- After the year of 2000, three groups are devised, with 13 in each group to evaluate.



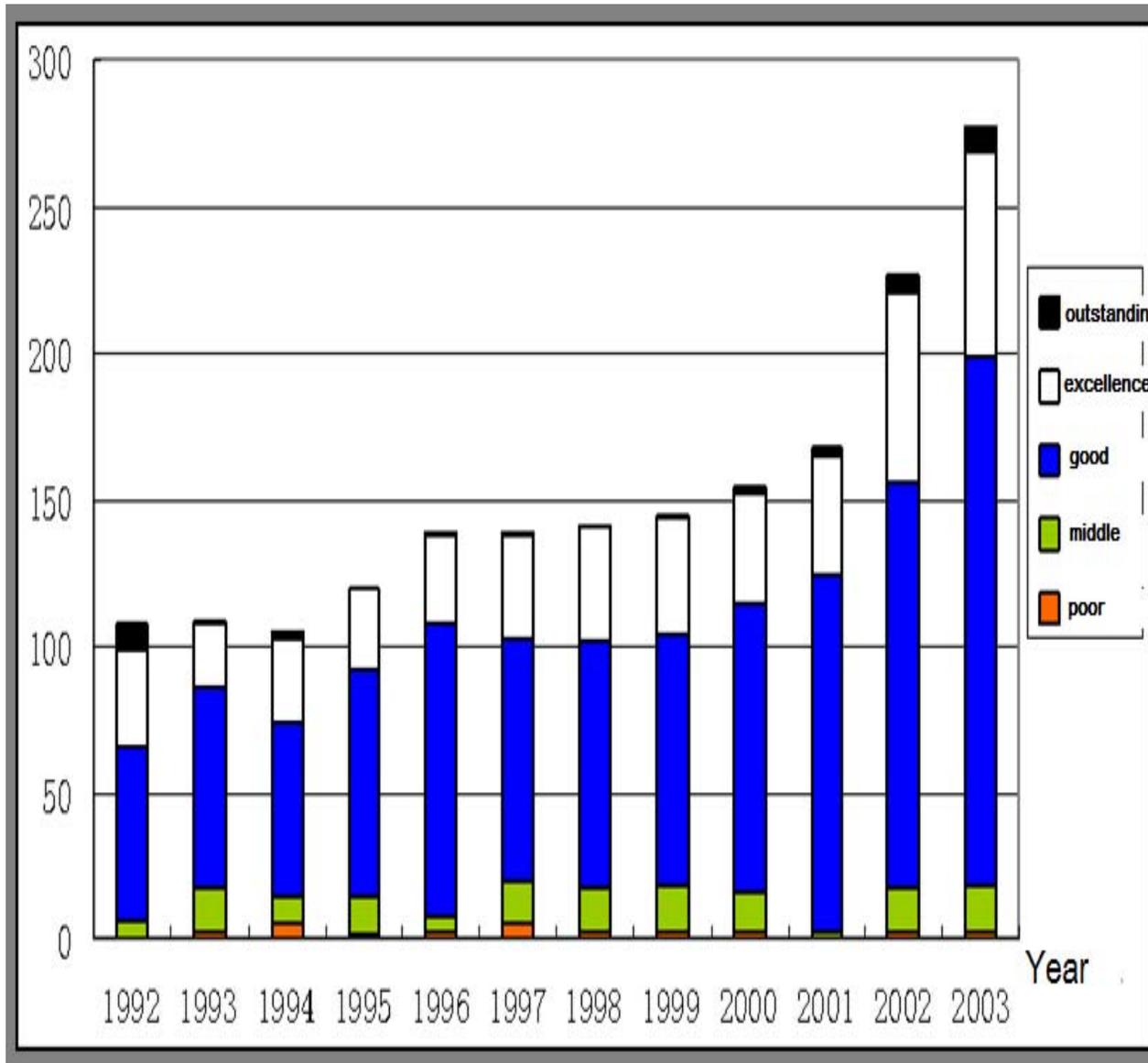
Indicator System (1)

Indicators	Standards	Score
Report and monograph (RM)	a. Articles on High-ranking international journals or invited speech on reputed international conference; b. Articles on High-ranking domestic journals or publications; c. finishing good research report; d. publishing on domestic journals or finishing research report; e. no reports and publication; f. Expert Special Rewarding	a.10-9 b.8-6 c.5-4 d.3-1 e.0 f.
Academic innovation (AI)	a. Novel ideas articulated and gaining international recognition, or national awards; b. Novel idea articulated and gaining domestic peer recognition, or provincial/ministries awards; c. novel ideas in publications and gaining awards; d. no novel ideas; e. ESR	a.14-11 f. b.10-6 c.5-1 d.0
Policy suggestion (PS)	a. Great impact on national decision-making; b. substantially affecting departments, regions, enterprises, and management; c. having impact on decision making and management and ; d. no policy and practical impact; e. ESR	a.10-9 b.8-5 c.4-1 d.0 f.
Overall impact (OI)	a. Great economic and social impact; b. noticeable or potential economic and social impact; c. has the impact; d. no impact; e. ESR	a.8-7 b.6-4 c.3-1 d.0 f
International cooperation (IC)	a. Promoting authentic international cooperation; b. conforming exchange during program implementation; c. no exchange d. ESR	a.4-3 b.2-1 c.0 d
Talent training and development (TTD)	a. Bringing about leading academic talents; b. participated by Ph. D. or master students; c. no observable talents development d. ESR (positive or negative, not exceed one half of the maximum in this dimension)	a.4-3 b.2-1 1 c.0 d.

Ex Post Program Evaluation Indicator System (2)

- P. Score = $RM(10+5)+AI(14+7)+PS(10+5)+OI(8+4)+IC(4+2)+TTD(4+2)$
 - Outstanding: >31
 - Excellence: 21-30
 - Good: 11-20
 - Middle: 6-10
 - Poor: <6
- Consideration in designing indicators
 - Simple rather than complicated
 - Concise and convenient indicators guarantee the accuracy and efficiency of evaluation.
 - Reflect not only quantity but also quality and impact of the program.
 - With definite standard to judge, and respect the subjectivity and discretion of the experts
 - Confirmed by external judgments to gain more social recognition,
 - e.g, the initiative of “Selection and Designation of the Key Journals in Management Science” in 1998 and 2007 have identified 30 key academic journals in the field of management science as the reference to establish the measures of ‘high level academic journal’ in performance evaluation.

Utilization of Evaluation Results



- Promulgation of Evaluation results
 - Informing the relevant institutions of the results
 - Publicized on the websites for social reference
- Decision on funding applicants
- Reports on the prominent research outcomes to the society

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Data Acquisition

- The type of data needed in program evaluation
 - Quantitative: Academic production, published paper and monographs etc.,
 - Qualitative
 - Benefit scope, academic innovation, production and citation, talent training and development, etc.
 - Judgment formed on the basis of comparing the goal statements in the research proposals
- Considering the attribute of basic research when collecting data
 - There exists Lag between program terminal and the manifestation of social impact
 - In order to make the social impact more evident, the interval of assessing the finished program was set to be one year long
- Ensuring the Data Quality
 - Asking the PI to bear the risk of low Academic immorality and low Ethics
 - Highlighting Accountability: data checked by the Department of Management Science to confirm the accuracy
 - Reported publications should happen after being funded
 - Clear marked with ‘funded by NSFC’ in the acknowledgement or note section in publication .
 - Relevancy: the research content should be related with the finished project research

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Future Development : General Effects

- Positive Effects
 - Zero complaint since proclaiming all the evaluating results (including medium and poor) since 2004
 - Providing decision reference for later funding
 - Explicit indicators lead to more strategic direction
 - Regularized program management
 - Large amount of information database and case pool
- ‘Negative’ Effects
 - More positive and confirmatory than negative and critical results, ‘window dressing’
 - Over reliance on experts’ views renders doubts on the fairness of evaluation
 - The good will be awarded, but the bad will never be punished
 -

Future Development : From NSFC to DMS

- Probe into the Practice
 - Learning from the experiences of other countries
 - Promoting the mutual understanding of various departments for evaluation innovation diffusions
 - Investigating the feasibility of evaluating organization, including departments and NSFC as a whole
- Make the ‘Best Practice’ of DMS better
 - Polishing the relationships among different indicators, e.g. policy suggestion and overall impact
 - Integrating the application evaluation and ex post performance evaluation
 - Adding online evaluation to the current conference evaluation approach
 - Establishing Funding Results Open system to prevent academic fraud
 - Using spot test approach to meet the challenge of rising applications
 - Exploring the different influencing factors of Program Performance

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THANK YOU!

Further questions, please contact

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